
BY THE COMPTROLLER GENERAL
Report To The Chairman, Subcommittee
On Government Information, Justice,
And Agriculture, House Committee On
Government Operations
OF THE UNITED STATES

Department Of Agriculture's Acquisition And Distribution Of Commodities For Its 1983 Payment-In-Kind Program

The Department of Agriculture's (USDA's) 1983 Payment-In-Kind (PIK) program paid producers of five commodities--wheat, corn, grain sorghum, rice, and cotton--a portion of the crops they would otherwise have grown in exchange for removing cropland from production. In response to questions raised by the Subcommittee, GAO reviewed USDA's procedures for acquiring, positioning, and delivering PIK commodities to producers.

In the seven states included in GAO's review, USDA generally met its payment obligations by providing commodities of the specified grade or quality, at a location called for by program provisions, and by the date promised. This report discusses how USDA could make future purchases at lower costs.



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COMPTROLLER GENERAL OF THE UNITED STATES

WASHINGTON D.C. 20548

B-213707

The Honorable Glenn English
Chairman, Government Information,
Justice and Agriculture Subcommittee
Committee on Government Operations
U.S. House of Representatives

Dear Mr. Chairman:

In response to your letter of July 29, 1983, we reviewed a number of aspects of the Department of Agriculture's (USDA's) Payment-in-Kind (PIK) program. In subsequent discussions with your office, we agreed specifically to evaluate USDA's (1) acquisition of commodities needed to meet its PIK obligations, (2) positioning or locating of PIK commodities throughout the country for distribution to producers, and (3) delivery of PIK commodities to producers.

USDA's 1983 PIK program limited the production of five commodities--wheat, corn, grain sorghum, rice, and cotton--by reducing the number of acres planted in these crops. USDA compensated producers for their idled acres with certain amounts of the crops they would otherwise have harvested. For all commodities distributed, USDA specified grade or quality and availability dates, generally timed to coincide with the normal regional harvest date for each commodity. Wheat, corn, and grain sorghum, usually marketed where they are grown, were to be made available at locations near participating producers.

In 1983 participating producers idled about 48 million of the 212 million acres USDA expected to be planted in the five PIK commodities. This obligated USDA to provide producers with about 546 million bushels of wheat, 1.8 billion bushels of corn, 178 million bushels of grain sorghum, 2 billion pounds of cotton, and 4.1 billion pounds of rice as compensation. Because USDA did not own enough of these commodities except rice to meet its PIK obligations, it purchased additional quantities from producers with outstanding Commodity Credit Corporation (CCC)¹ loans; producers

¹CCC is a government-owned and -operated organization created to stabilize, support, and protect farm income and prices. Part of this responsibility entails maintaining balanced and adequate supplies of agricultural commodities and helping in their orderly distribution.

forfeited a portion of their loan collateral (commodity) in return for forgiveness of their loans and the right to retain a percentage of the collateral.² USDA used a competitive bid process to select bids from producers who retained the lowest percentage of their commodities.

After acquiring the commodities, USDA needed to position or relocate some of the wheat, corn, and grain sorghum because the program provided that these three commodities would be made available locally to the producers. Such positioning was not needed for rice or cotton since those commodities are not necessarily marketed where they are grown and, therefore, did not have to be made available locally under the PIK guidelines. For wheat, corn, and grain sorghum, USDA first identified counties where it owned more commodities than needed to supply the county's PIK participants (surplus counties) and counties where it lacked sufficient commodities (deficit counties). USDA then exchanged USDA commodities in surplus counties for commodities owned by private warehouses in deficit counties.

After positioning the commodities, USDA issued loading orders to make the commodities available for delivery to the participating producers. A loading order instructs a warehouse to release a specified amount of a commodity. Producers were allowed 5 months in which to pick up their PIK commodities.

We found that in most cases USDA met its PIK obligations in the seven states³ reviewed by providing commodities (1) of the specified grade or quality, (2) at a location called for by the program provisions, and (3) on the date promised. However, we found that USDA could have acquired the commodities at a lower cost had it evaluated the bids on a unit cost basis (that is, the cost per bushel or per pound) instead of on a lowest percentage bid basis. A comparison of the unit cost basis and the lowest percentage bid basis using an average value of outstanding loans based on CCC's financial records resulted in an estimated savings of about \$58 million. Further, we found that USDA's positioning of PIK commodities was affected by changing data on commodity

²Farmers choosing to participate in USDA farm programs receive the benefit of obtaining a commodity loan from CCC. Under this loan program a farmer uses crops as loan collateral and receives a CCC loan which guarantees the farmer a certain minimum price for the crop.

³California, Georgia, Illinois, Kansas, Louisiana, Tennessee, and Texas.

availability and needs for program payments in specific locations. These data changed frequently as counties revised their estimates of payment needs. However, the impact of these factors was not significant. USDA experienced some delays in distributing PIK commodities to producers and positioned about 3.5 million bushels, or about 1 percent of exchanged commodities, that were eventually not needed for PIK. This extra positioning cost USDA about \$1.7 million.

We worked primarily at USDA's headquarters in Washington, D.C., and its Agricultural Stabilization and Conservation Service's (ASCS') Kansas City field office, which was responsible for conducting PIK commodity operations. At these locations we reviewed program documentation and interviewed officials responsible for managing the PIK program. We also reviewed PIK reports prepared by USDA's Office of Inspector General (OIG). The appendixes to this letter detail the methodology used to address each of your concerns. Our work was done between September 1983 and January 1984 in accordance with generally accepted government audit standards.

We have another review underway which will discuss other aspects of USDA's commodity exchange program and its distribution of PIK commodities in five additional states.

The remainder of this letter discusses each of your concerns and our findings. Appendix I details each matter contained in this letter and describes briefly how the PIK program works.

PIK COMMODITY ACQUISITION COSTS COULD HAVE BEEN LOWER

As USDA's OIG reported on April 22, 1983, USDA could have reduced the cost of the loan commodities purchased by comparing bids on a unit cost basis (that is, the cost per bushel or per pound) instead of the producer's offered bid percentage. If USDA had compared bids on a unit cost basis, USDA could have accepted or rejected individual bids on the basis of their cost to the government for each unit of the commodity acquired. In contrast, rejecting or accepting bids on the basis of the offered bid percentage did not provide USDA with information on the actual acquisition cost of each unit.

How the acquisition program worked

USDA designed the PIK program to compensate producers with commodities from two sources: (1) commodity inventories owned by CCC and (2) commodities serving as loan collateral for producers with CCC loans. If a participating producer had one or more outstanding loans with CCC, USDA forgave part or all of the loan or loans, and the producer retained the corresponding collateral

(commodity) as his or her PIK payment. A producer who did not have an outstanding loan received a letter entitling him or her to receive CCC-owned commodities as payment.

USDA developed purchase programs to acquire the additional commodities needed to meet its PIK payments through a competitive bidding process. In March 1983 USDA administratively established the purchase program for acquiring wheat, corn, and grain sorghum for the PIK program. In May, USDA established a purchase program for acquiring cotton and accepted maximum bids lower than those accepted for wheat, corn, and grain sorghum. In July 1983, in order to be equitable to cotton producers, Congress passed legislation requiring USDA to accept bids that on a percentage basis were not less than those accepted under the wheat, corn, and grain sorghum purchase program. Because of this legislation, our analysis and estimated savings apply only to the wheat, corn, and grain sorghum purchase program.

Producers who had outstanding CCC loans submitted bids to local ASCS county offices if their collateral was not already being used as their PIK payments. This meant that any producers having pledged commodities as collateral for a CCC loan who either did not participate in the PIK program or did participate in the PIK program and had more collateral than was needed for their PIK payment could submit bids to their local ASCS county offices. Each county office then forwarded its bid information to the Kansas City office.

Each bid was expressed as a percentage of the loan collateral a producer would keep in exchange for forfeiting the remaining loan collateral to CCC for use in making PIK payments. The individual producer determined the bid percentage offered. USDA forgave the producer's loan and allowed the producer to keep the difference between the quantity of the loan collateral forfeited to CCC and the original quantity of the loan collateral. For example, a producer with 50,000 bushels of loan collateral might submit a bid of 10 percent. In this case, if USDA accepted the bid, the producer would keep 5,000 bushels and USDA would get 45,000 bushels while forgiving the producer's loan on the entire 50,000 bushels. Stated another way, USDA would acquire 90 percent of the offered loan collateral while forgiving 100 percent of the loan.

USDA compared the offers received and accepted those with the lowest bid percentages first. USDA ultimately accepted all bids of 20 percent or less, except for wheat where some bids of 25 percent were accepted. USDA accepted these bids without considering

the effects that varying loan rates,⁴ accrued interest, or loan due dates would have on the cost of obtaining commodities pledged as loan collateral. Consequently, USDA did not consider what it cost to forgive each loan.

Unit cost approach considers
cost of forgiving loans

When USDA forgives a loan it gives up the outstanding loan principal and any accrued interest it would otherwise receive. For any given loan, the amount of outstanding loan principal is determined by the loan rate, which varies by location and year of loan origin. For example, the OIG reported that for bids made as part of the PIK loan purchase program, loan rates in 15 Iowa counties varied from \$2.12 to \$3.34 per bushel. Using these varying loan rates in Iowa as a basis for comparison would mean that accepting the 10 percent bid in the previous example could have cost USDA \$106,000 if the loan rate was \$2.12 per bushel ($\$2.12 \times 50,000$ bushels) or as much as \$167,000 if the loan rate was \$3.34 per bushel ($\$3.34 \times 50,000$ bushels). Considering the cost of forgiving each loan, developing a unit cost for each bid, and accepting those bids having the lowest unit costs could have allowed USDA to select bids based on lowest cost.

Calculating a unit cost for each bid requires using each bid's loan rate. The actual loan rates for each of the 286,000 bids that USDA received were not available to us because, between the time of the purchase program and the time of our review, USDA closed out most of the loans and deleted the loan records from its automated loan file. However, other information--the commodity, the crop year, the bidder's state and county, and whether the bidder's loan commodity was stored on the farm or in a CCC warehouse--was available in the automated bid file. We categorized each bid according to these factors and applied an appropriate estimated loan rate based on each bid's characteristics.

Using the estimated loan rates, we computed a unit cost for each of the 286,000 wheat, corn, and grain sorghum bids USDA received, using estimated loan rates for each bid. Then, we selected the number of bids, beginning with those of lowest unit cost for each commodity, necessary to acquire the same amount of commodities CCC actually acquired through the loan purchase program. By comparing the total cost of the bids selected using our

⁴The loan rate is the dollar amount, per bushel or pound of commodity, that CCC lends to producers. Loan rates vary according to the year and the location in which loans are made.

unit cost method to the total cost of the bids USDA selected, we estimated the savings possible by using the unit cost method.

The loan rates we initially used, after USDA Kansas City office officials agreed with using loan rates that we identified as the best available estimates of actual loan rates, resulted in an estimated cost savings of \$256 million. In commenting on our draft report and in subsequent discussions, USDA suggested that the average CCC book values of outstanding loans were more accurate estimated loan rates. Using these rates to calculate unit costs, we estimated savings of \$58 million. As stated above, the actual loan rates were not available to us in automated form. Without the time-consuming process of determining actual rates for all 286,000 bids by searching manual records, and then automating this data, we cannot conclude that USDA's book value rates are more (or less) accurate.

Our finding concerns the lower acquisition costs that result from the unit cost approach, not the precise dollar amount that would have been saved if this approach had been used for purchasing PIK commodities. The magnitude of each savings estimate supports our finding that substantial savings are possible by using the unit cost approach. (Appendix II details the methodology used to develop each of these estimates.)

Our estimates of the cost of acquiring commodities under both USDA's bid percentage method and our unit cost method--and, therefore, the difference between them--are based on the outstanding loan principal and do not take into account (1) the accrued interest on each loan bid, (2) the differences in the loan due dates, and (3) storage costs. Also, the savings from using the unit cost approach could be reduced by additional costs to position the commodities where needed.⁵ Nevertheless, USDA officials agreed that our methodology was reasonable.

USDA officials stated that they did not use unit cost in deciding which bids to accept because of time pressure to acquire commodities and uncertainty about the time needed to use a unit cost approach. Timing was a factor because officials were concerned that they would not be able to compute a unit cost for each bid with a high degree of accuracy within the available time period.

⁵Neither we nor USDA can determine the amount of possible additional costs to position commodities. (See app. I, p. 8.)

After reviewing the circumstances surrounding the decision to use the bid percentage approach, we believe that USDA could have developed a unit cost for each bid within the time period and without sacrificing accuracy by using either of two methods: (1) having ASCS's local county offices calculate a unit cost for each bid submitted by its producers or (2) having the Kansas City office calculate a unit cost for each bid using its then-current loan file. (The loan file contains specific information, such as the loan amount, for each loan.) Officials in three county offices⁶ told us that they could have computed a unit cost for each bid, using readily available loan records. They could have forwarded this information to the Kansas City office along with the bid within the same time period.

We acknowledge that USDA was under considerable time pressure and under the circumstances was faced with a difficult decision. Because of these factors and because the decision was made in the past, we do not wish to substitute our judgement for USDA's after the fact. However, because of the significant savings potential of using a unit cost approach, we wanted to demonstrate that the approach was feasible for the PIK purchase program and should be used in future USDA commodity purchases.

Large commodity purchases are not unique to the PIK program. For example, as a result of the Soviet grain embargo in 1980, USDA conducted a large-scale purchase program for wheat. In that instance USDA used a unit cost approach, soliciting bids on a dollars-per-bushel basis. Because a unit cost approach will permit USDA to minimize costs to the government as well as acquire the needed commodities, in our opinion, USDA should use a unit cost approach in the event of future purchases of loan collateral.

Recommendation to the
Secretary of Agriculture

Because comparing bids on a unit cost basis will allow USDA to acquire commodities at the lowest cost, we recommend that the Secretary use the unit cost approach in future acquisitions of commodities held as loan collateral.

⁶These officials were the County Executive Directors of Reno County, Kansas, and Kossuth County, Iowa, and the Chief Program Assistant of Deaf Smith County, Texas. We contacted these directors because their counties have historically high amounts of CCC loan activity. While not statistically representative of all ASCS county offices, these county offices are typical in that the procedures for processing bids under the PIK commodity acquisition program were the same for all county offices nationwide.

POSITIONING OF PIK COMMODITIES

Outdated inventory information and changing estimates of PIK obligations affected USDA's efforts to position or relocate wheat, corn, and grain sorghum to match PIK obligations on a county-by-county basis. However, the programwide impact of the outdated inventory information and changing obligation estimates was not significant. Because of these factors, USDA exchanged commodities to make about 3.5 million bushels of wheat, corn, and grain sorghum, at a cost of about \$1.7 million, available in counties where they were eventually not needed for PIK. These exchanges represent about 1 percent of the total commodities exchanged.

USDA's county offices provided information on USDA's PIK obligations to the Kansas City office in May 1983 and updated the information several times between May and October. Consequently, the estimated obligations fluctuated during the time in which the Kansas City office was trying to meet those obligations. For example, during one month the estimated needs for corn increased by 112 million bushels. Furthermore, information on the amount of CCC inventory available for PIK was updated weekly to reflect changes, including increases from loan forfeitures. The large volume of forfeitures for PIK delayed recording forfeiture data in the automated inventory system, causing the weekly updates of available inventory to be understated.

USDA USUALLY MET ITS DISTRIBUTION OBLIGATIONS IN THE STATES WE REVIEWED

We found that USDA usually met its obligations in the seven agricultural states we reviewed by providing commodities by the prescribed availability dates, of appropriate grade, and in a location called for by the PIK program. Specifically, the loading orders we reviewed showed that, in the counties in our sample, an average 96 percent of PIK commodities were made available by the prescribed dates and an average 95 percent of the commodities were of the grade specified for PIK. An average of 76 percent of the wheat, corn, and grain sorghum was made available in the producers' own counties, while the remaining 24 percent was made available at warehouses an average of 62 miles from the producers' counties. The local agricultural representatives and producers contacted during our review said that they were generally satisfied with the way USDA handled its PIK payment obligations.

AGENCY COMMENTS AND OUR EVALUATION

In commenting on our draft report (see app. IV), USDA said that it had considered, but not used, a unit cost approach in

selecting bids because it was more complex, time consuming, and would not have resulted in a significant cost difference. In a subsequent discussion, the ASCS Deputy Administrator for Management said that a unit cost approach may have been more complex and time consuming because of increased errors and delays in county offices and in the Kansas City office.

While we agree that there is potential for errors and delays in a program of this size, we believe that the risk in this case was minimal under either of the two methods suggested in the report. For instance, county offices could have computed the unit cost and submitted it to USDA's Kansas City office. This would have required only one additional calculation, and the data needed to do it was available in county files. Moreover, the Chief of the Analysis and Procedures Division at USDA's Kansas City office, the official in charge of the loan purchase program, agreed that USDA could have used the unit cost approach if it had requested the county offices to compute each bid's unit cost. This official also agreed USDA could have used actual loan rates from its loan file to calculate unit costs because the loan file contained, until later deleted, the loan rate for each outstanding loan for which bids were received; however, he stated that this method may have taken more time because of problems in matching the loan file with the bid file. But, we noted that the loans from the bid file had to be matched with the loan file eventually because the accepted bids resulted in USDA forgiving the associated loans, and USDA experienced matching problems with about 5-7 percent of the loans. While this portion of the bids may have required additional processing time, USDA could have acquired the needed commodities within the necessary time frame using the remaining 93-95 percent that did not have matching problems. In addition, because the process of resolving matching problems is the same under either approach--bid percentage or unit cost--bids with matching problems should not have taken any more time to process under the unit cost method than under USDA's bid percentage method. In either case, the bids would cause USDA some delay in acquiring the commodities represented by the problem bids.

In our draft report, we estimated that using a unit cost approach to purchase loan commodities would save about \$256 million. This estimate was developed after officials at the Kansas City office agreed with using loan rates we identified as the best available estimates of actual loan rates for the bids USDA received. However, in commenting on our draft report, USDA stated that this figure was distorted because our estimated loan rates for warehouse-stored loan commodities were higher than the actual rates and suggested using either national average loan rates or rates based on the value of outstanding loans (from CCC financial records). (Loans for commodities stored in warehouses have higher loan rates than farm-stored commodities, to reflect

the cost of transporting the commodities from the producer's farm to the warehouse.) In a subsequent discussion, the director of the Kansas City office responsible for maintaining loan records suggested that the rates based on the value of outstanding loans were more accurate for both farm-stored and warehouse-stored loan commodities. The director and the deputy administrator both agreed, however, that using a unit cost approach would lead to lower acquisition costs.

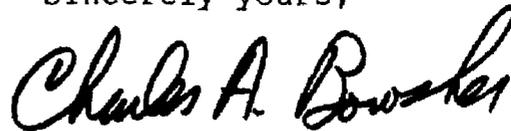
Our objective is not to demonstrate the precise extent of savings possible if USDA had used a unit cost approach in the 1983 PIK program, but rather to demonstrate that a unit cost approach allows lower acquisition costs than the bid percentage approach. Therefore, we also used the rates suggested by USDA, which are based on the average value of outstanding CCC loans, and estimated savings of \$58 million using the unit cost approach. (The detailed methodology used to calculate each estimate is in app. II.)

USDA also commented that using a unit cost approach would have resulted in forgiving fewer outstanding loans, leading to the need for additional expense for commodity positioning, which would offset our estimated savings. We agreed that using a unit cost approach would have resulted in forgiving fewer loans. We revised our report to say that the estimated savings would be reduced if additional commodity positioning resulted. However, as stated on page 6, neither we nor USDA can determine the amount of possible additional costs to position commodities.

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As arranged with your office, unless you publicly announce its contents earlier, we plan no further distribution of this letter until 30 days from its issue date. At that time, we will send copies to interested parties and make copies available to others on request.

Sincerely yours,



Comptroller General
of the United States

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ABBREVIATIONS

ASCS	Agricultural Stabilization and Conservation Service
CCC	Commodity Credit Corporation
CED	County Executive Director
OIG	Office of Inspector General
PIK	Payment-in-Kind
USDA	U.S. Department of Agriculture
bu	bushels
lb	pounds

IMPLEMENTATION OF USDA'S PAYMENT-IN-KIND PROGRAMPIK AND HOW IT WORKED

USDA announced the 1983 PIK program on January 11, 1983, in response to trends evolving in the agricultural sector since 1980. These trends included record harvests and decreased foreign and domestic demand, resulting in low commodity prices for producers, decreased farm incomes, and a large buildup of government-held grain and cotton stocks. To help improve these conditions, USDA announced the PIK program to reduce the 1983 production of wheat, corn, grain sorghum, cotton, and rice by reducing the number of acres planted in these crops.

To participate in the PIK program producers agreed to take prescribed portions of their acreage, or in some cases their entire farms, out of production and to receive as compensation from USDA a certain portion of the commodity they otherwise would have planted and harvested. For PIK, participating producers removed from production about 48 million of the approximately 212 million acres USDA expected to be planted in the five PIK commodities. The latest available data--as of January 4, 1984--shows that this reduction in acreage obligated USDA to provide or pay producers about 546 million bushels of wheat, 1.8 billion bushels of corn, 178 million bushels of grain sorghum, 2 billion pounds of cotton, and 4.1 billion pounds of rice.

USDA designed the PIK program so that payments could be made from two sources--from inventory owned by USDA's Commodity Credit Corporation (CCC)¹ and from producer-owned commodities held by CCC as collateral against loans previously made to producers. If a participating producer had one or more outstanding loans with CCC, USDA forgave part or all of the producer's loan or loans (principal and interest), and the producer retained the commodity used as loan collateral as the PIK payment. A producer who did not have an outstanding loan received a letter entitling him or her to receive commodities in CCC inventory as payment.

USDA's Agricultural Stabilization and Conservation Service (ASCS) had responsibility for administering the PIK program. ASCS' Kansas City commodity office carried out the commodity operations for the program. These operations consisted of acquiring, positioning, and allocating the needed commodities to local

¹The Commodity Credit Corporation is a government-owned and -operated organization created to stabilize, support, and protect farm income and prices. Part of its responsibility entails maintaining balanced and adequate supplies of agricultural commodities and helping in their orderly distribution.

ASCS county offices nationwide. Each county office then issued certificates to the county's participating producers, enabling them to receive their PIK commodities. County offices also enrolled producers who elected to participate in the PIK program, accepted producers' bids to sell their commodities to CCC, and provided enrollment and bid information to the Kansas City office.

Because of the large participation in PIK, USDA did not have enough CCC-owned stocks of wheat, corn, grain sorghum, and cotton available to pay producers who did not have outstanding loans. As a result, USDA had to purchase additional quantities. As provided in PIK regulations, it purchased these additional quantities from producers who had outstanding CCC loans, and who were not using the loan collateral for their own PIK payments. Using this process USDA purchased 188.2 million bushels of wheat, 760.1 million bushels of corn, 111.1 million bushels of grain sorghum, and 374.2 million pounds of cotton.

Even after purchasing these commodities, USDA did not have enough wheat and cotton to meet all its PIK obligations. However, USDA had established procedures, labeled "harvest for PIK," to make up for these shortages. Under these procedures, USDA required wheat and cotton producers who were to receive their PIK payments from CCC inventory and who had not enrolled their entire wheat and cotton acreage in PIK to obtain CCC loans for their 1983 crops. USDA then forgave the loans, and the producers retained the wheat or cotton as their PIK payment.

The following table summarizes the amount of 1983 PIK obligations and USDA's sources of payment.²

PIK Obligations and Sources of Payment

<u>Crop</u>	<u>Total PIK obligation as of 1-4-84</u>	<u>Source of Payment</u>	
		<u>Producer loan collateral</u>	<u>CCC inventory</u>
Wheat (bu)	546,371,527	364,226,324 ^a	182,145,203
Corn (bu)	1,788,566,309	845,388,525	943,177,784
Grain sorghum (bu)	177,524,528	83,101,636	94,422,892
Cotton (lb)	1,934,490,786	1,056,429,191 ^b	878,061,595
Rice (lb)	4,119,254,198	2,165,990,746	1,953,263,452

^aIncludes 149 million bushels from 1983 harvest for PIK loans.

^bIncludes 311 million pounds from 1983 harvest for PIK loans.

²The quantities in the table are expressed in commodities of the grade specified for PIK. The quantities ultimately distributed were somewhat greater because of adjustments compensating for differences in commodity grades. (See pp. 14-15.)

After acquiring the inventory, USDA needed to position its inventory geographically to match, at the county level, its PIK payment obligations for wheat, corn, and grain sorghum because the program provided that these commodities would be made available locally to producers. This was an important consideration for these commodities because they are usually marketed at the local level. Such positioning of inventory was not done for rice or cotton because these crops are generally not marketed where they are grown. Therefore, the PIK program provided that rice and cotton producers receiving PIK payment from CCC inventory would take ownership of the commodities at storage locations.

The first step in the positioning process was to identify CCC inventories already in position, that is, located in the counties in which they were needed to satisfy PIK obligations. By comparing this information with USDA's PIK obligations, the Kansas City office identified counties containing CCC inventories greater than the amounts needed for PIK (surplus counties) or less than the amounts needed for PIK (deficit counties).

Once the deficit counties were identified, USDA used an exchange program to relocate PIK commodities to deficit counties. Under this program, CCC-owned commodities held at warehouses in surplus counties were exchanged with privately owned commodities held at warehouses in or near deficit counties. The exchanges were made through a competitive bid process, whereby bidders agreed to fulfill USDA's PIK obligations in deficit counties in exchange for ownership of CCC commodities in a designated location. For example, a bidder would offer to meet USDA's PIK obligations of 50,000 bushels of wheat in a deficit county in exchange for ownership of 55,000 bushels of CCC wheat of the same grade located elsewhere. The difference of 5,000 bushels represents the cost to CCC for the exchange. Using exchanges, USDA fulfilled 13.3 percent of its wheat obligations, 15.2 percent of its corn obligations, and 13.5 percent of its grain sorghum obligations at a cost of about \$170 million.

The final step in making the commodities available was allocating the commodities to individual counties through the use of loading orders. A loading order instructs a warehouse to release a specified amount of a commodity. The Kansas City office simultaneously sent a loading order to a warehouse and a copy to the local ASCS county office to indicate availability of commodities for PIK payments. The county office then issued PIK entitlement certificates to the producers, notifying them that their PIK payments were available in the indicated warehouse. Under program terms, the producers had 5 months in which to redeem their PIK entitlements.

PIK commodities from CCC's inventory were to be made available on certain dates specified when the program was announced.

The availability dates varied, generally following the harvest date for each commodity in each area of the country. The availability dates for wheat, corn, and grain sorghum were earliest for the southernmost sections of the country, increasing by 2-week increments through the central and northern sections. The earliest availability date for wheat was June 1; for rice and cotton, August 1; and, with minor exceptions, October 1 for corn and grain sorghum.

OBJECTIVES, SCOPE, AND METHODOLOGY

Our objectives were to evaluate the USDA's acquisition, positioning, and distribution of PIK commodities. We evaluated commodity acquisition by comparing USDA's method to an alternative method identified by USDA's Office of Inspector General (OIG). We detail the methodology for this evaluation in appendix II. We evaluated commodity positioning by (1) examining the Kansas City office's process for matching PIK obligations with available inventory and (2) reviewing the information USDA officials used to make decisions regarding inventory positioning.

To evaluate PIK commodity distribution, we selected seven agricultural states from among those having the greatest PIK requirements for CCC-owned commodities: Louisiana for rice, California for cotton, Texas for grain sorghum, Kansas and Tennessee for wheat, and Illinois and Georgia for corn. We selected two states for wheat and corn because these commodities made up the greatest volume of PIK payments nationwide. The time available for our evaluation did not permit us to select more than seven states. For each state, we randomly selected a number of counties. We then reviewed, at the Kansas City office, the loading orders for each county to determine the extent to which USDA had provided commodities (1) on the availability date, (2) of the grade, and (3) in a location specified by PIK regulations. We followed our review of loading orders with telephone contacts with producers and local ASCS officials, called County Executive Directors (CEDs), to obtain their opinions on USDA's distribution of PIK commodities. Appendix III details our methodology for the evaluation of commodity distribution.

PIK COMMODITY ACQUISITION COSTS COULD HAVE BEEN LOWER

As USDA's Office of Inspector General (OIG) reported on April 22, 1983, CCC could have reduced purchase costs for loan commodities by comparing bids on a cost per unit basis (that is, the cost per bushel or pound) instead of the producer's offered bid percentages. To implement cost-effective acceptance of bids on a unit cost basis requires essential information about the actual cost to the government of acquiring the commodity. For the PIK

program, USDA obtained commodities by having producers forfeit outstanding loan collateral to CCC in return for forgiveness of the loans. In this case, determination of the actual cost to the government entails consideration of varying loan rates, accrued interest, and differing due dates for loans. USDA's lowest offered bid percentage basis did not consider what it cost the government to forgive the loan.

We estimate that if USDA had used unit cost approach for accepting bids under its commodity purchase program, the value of the loans forgiven to acquire commodities for PIK would have been less. For example, using the average CCC book value of outstanding loans to estimate each bid's unit cost, we estimated savings of about \$58 million.

How the acquisition program worked

Because of the large participation in PIK, USDA did not have enough CCC inventory of wheat, corn, grain sorghum, and cotton available to pay producers who did not have outstanding loans. It did, however, have enough inventory to meet its rice payments. Consequently, USDA conducted two purchase programs, one for wheat and feed grains (corn and grain sorghum) and one for cotton. The purchase program for acquiring wheat and feed grains for the PIK program was established administratively in March 1983. In May, USDA established a purchase program for acquiring cotton and accepted maximum bids lower than those accepted for wheat, corn and grain sorghum. In July 1983, in order to be equitable to cotton producers, Congress passed legislation requiring USDA to accept bids that on a percentage basis were not less than those accepted for wheat, corn, and grain sorghum. Because of this legislation, our analysis and estimated savings apply only to the wheat and feed grain purchase program.

On March 29, 1983, USDA announced the offer to purchase wheat, corn, and grain sorghum from producers with outstanding CCC loans who were not using the loan collateral as their own PIK payment. USDA solicited bids from these producers, with the bid expressed as a whole percentage of the offered loan collateral the producer would keep in exchange for forfeiting the remainder to CCC. A producer might, for example, submit a bid of 10 percent for 50,000 bushels. USDA would then acquire 90 percent (45,000 bushels) in return for forgiving the producer's loan on the entire 50,000 bushels and allowing the producer to retain 10 percent (5,000 bushels).

As a result of the bidding process, USDA received about 286,000 offers from wheat, corn, and grain sorghum producers having commodities pledged as collateral for CCC loans. On April 22, 1983, after receiving all the bids, USDA announced that it

accepted all bids of 20 percent or less for corn, grain sorghum, and 1982 wheat and 25 percent or less for 1981 and prior crops of wheat. Overall, about 204,000 of the 286,000 bids submitted were accepted. Using this method, USDA acquired enough corn and grain sorghum to meet all of its PIK payment obligations for those commodities. However, USDA did not acquire the amount of wheat it needed. So, in order to meet its remaining PIK payment obligations for wheat USDA used the harvest for PIK program.

Unit cost approach considers cost of forgiving loans

In forgiving a loan, USDA loses both the outstanding loan principal and any accrued interest owed. Loan rates, which vary by location and year of loan origin, determine the amount of outstanding loan principal. Loan rates may vary substantially over a few years.³ OIG reported, for example, that some 15 Iowa county loan rates ranged from \$2.12 to \$3.34 per bushel. Take, as an example, the 50,000 bushel, 10 percent bid mentioned earlier. USDA, by using the lowest offered bid percentage, could have paid from \$106,000 at a loan rate of \$2.12 per bushel ($\$2.12 \times 50,000$ bushels) to a high of \$167,000 at a loan rate of \$3.34 per bushel ($\$3.34 \times 50,000$ bushels). In either case, USDA would acquire 45,000 bushels and allow the producer to retain 5,000 bushels at his/her 10 percent bid. The unit cost, in this instance, would vary from \$2.36 to \$3.71. USDA could have reduced commodity acquisition costs by calculating a unit cost for each bid and accepting those with the lowest unit costs.

Since actual loan rates for the 286,000 bids received were not available in USDA's automated files at the time of our review, the actual unit cost could not be calculated for each bid. Other information was available in the files, however, which enabled us to categorize each bid and to estimate an appropriate loan rate: the commodity, the crop year, the bidder's state and county, and farm or warehouse storage for each commodity. We used these estimated loan rates to compute a unit cost for each of the 286,000 bids USDA received. Then, we selected the number of bids, beginning with those having lowest unit cost for each commodity,

³Loan rate variances due to location reflect different market conditions that exist throughout the country for each particular crop. For example, the loan rate for wheat varied from \$3.25 per bushel in some Colorado counties to \$3.87 per bushel for some Washington counties in 1982. Further, loan rates have tended to increase over time. For example, the national average loan rate for wheat increased from \$2.25 per bushel in 1977 to \$3.55 per bushel in 1982.

necessary to acquire the same amount of commodities that CCC actually acquired through the loan purchase program and used for PIK.

After consulting Kansas City office USDA officials, we used loan rates which resulted in an estimated \$256 million cost savings based on the unit cost approach. USDA's comments on our draft report suggested, however, that a more accurate estimated loan rate would be the average CCC book value of outstanding loans. We recalculated the unit costs using the average CCC book value and estimated a \$58 million savings to USDA. As mentioned before, the actual loan rates were not available in automated form, and we had insufficient time to search the manual records for all 286,000 bids. We could not, therefore, conclude that USDA's suggested book value rates and the resulting estimated savings are more (or less) accurate.

We found that a unit cost approach allows lower acquisition costs, although we could not calculate the precise dollar amount that would have been saved had this approach had been used for purchasing PIK commodities. The magnitude of both savings estimates, \$58 million and \$256 million, supports our finding that substantial savings are possible using the unit cost approach. Therefore, we have included both estimates in our report. (The detailed methodology used to develop each of these estimates is in app. II.)

Our estimate of the cost of acquiring commodities under both USDA's bid percentage method and our unit cost method--and therefore our estimate of the cost difference--does not take into account (1) the accrued interest on each loan bid, (2) the differences in the due dates of forgiven loans, and (3) storage costs. We did not include accrued interest because neither USDA's loan file nor its bid file includes this information. Time did not permit us to search and automate each bid to calculate the accrued interest for each loan. With some exceptions, USDA accrues interest on a loan only during its first year; the loan is subsequently interest free. Under a unit cost approach, loans with lower loan rates would tend to be favored because the lower loan rate would generally mean lower unit costs. Therefore, using a unit cost approach, USDA would lose less accrued interest, and including interest in the calculations would likely increase the estimated savings. Further, we did not consider the differences in the dates on which the forgiven loans were due because the expected repayment date could not be readily determined from the bid file. In general, USDA loses more when it forgives a loan due in the immediate future than when it forgives a loan due in several years. This is true because money available in the near future has a greater value than money available in the distant future. The fact that (1) our unit cost approach tends to favor

loans with lower loan rates and (2) older loans tend to have lower loan rates, suggests that our method tends to favor loans due earlier than the loans actually forgiven under USDA's method. Thus, including the expected repayment date in the analysis would likely decrease our estimated savings. Also, we did not include storage costs associated with commodities under loan because such costs do not affect the loan repayment amount.

Because a unit cost approach results in USDA forgiving fewer outstanding loans to acquire the same quantity of commodities, commodities would likely be acquired in fewer locations than under the bid percentage method. Consequently, some additional commodity exchanges would be necessary to position wheat, corn, and grain sorghum where needed. This increased cost would reduce the savings achieved through the unit cost approach. However, neither we nor USDA can quantify the amount of possible additional commodity positioning. We noted that the amount of commodities USDA positioned for the PIK program equaled about 39 percent of wheat, 36 percent of corn, and 22 percent of the grain sorghum USDA purchased, at a cost of about \$170 million. Thus, for example, a 5 percent increase in repositioned commodities would increase costs about \$8.5 million.

Using unit cost approach for PIK

The Chief, Analysis and Procedures Division, stated that USDA did not use unit cost as the criterion for selecting bids because of time pressure to acquire the needed commodities. The Deputy Administrator for Commodity Operations stated that he was not sure that USDA could have computed a unit cost for each bid and selected bids, in the time allowed for the purchase program. The Chief, Loan Branch, said that he did not know whether USDA could have computed a unit cost within the time available; he said that, at any rate, he and other officials believed there was insufficient time to select bids on any basis other than bid percentage.

USDA's PIK obligations were not known until after USDA tabulated the enrollment data about March 22, 1983. At that time, USDA officials realized that they needed additional amounts of wheat, corn, grain sorghum, and cotton. The first wheat availability date was June 1, and, with minor exceptions, October 1 for corn and grain sorghum. USDA needed time to process the loan documents and record the purchased commodities in CCC inventory. USDA announced the offer to accept wheat and feed grain bids on March 29, 1983, and accepted bids through April 15. County offices recorded the bids and forwarded the information to the Kansas City office to be compiled in an automated bid file. On April 22, USDA announced the bids selected.

We considered the time available to USDA for acquiring PIK commodities and attempted to identify how a unit cost approach could have been used within USDA's time constraints. We believe that USDA could have used the unit cost approach, excluding consideration of accrued interest, storage, and the expected repayment date of the forgiven loans, within the same time period using either of two methods. Officials in three county offices⁴ told us that they could have computed a unit cost for each bid, using readily available loan records, and forwarded it to the Kansas City office with the bid within the time period actually used. The county officials estimated that this calculation would have taken only a few moments for each bid. Alternatively, USDA could have used its then-current automated loan file, which shows among other things (1) the number of bushels under loan and (2) the outstanding loan principal. Using the loan file and the automated bid file, USDA could have computed a unit cost for each bid by dividing the quantity acquired by the outstanding loan principal.

If USDA county offices had computed a unit cost for each bid, this information would have been forwarded to Kansas City with other bid information and become part of USDA's bid file. By using these existing administrative channels, USDA could have used the unit cost approach without increasing administrative expenses. Matching the automated loan file with the automated bid file would require additional computer processing time, resulting in some additional expense, which would reduce the savings occurring from the unit cost approach. While we cannot quantify this expense, we do not believe it to be substantial because USDA would have used its existing ADP equipment and staff.

The Chief, Analysis and Procedures Division, agreed that if the county offices had computed the unit cost for each bid, USDA could have selected bids on the unit cost basis. He also agreed that USDA could have used its then-current loan file and the bid file to calculate the unit cost for each bid; however, he stated that, because of errors in matching the two files, this method would have taken more time. We noted that, because the accepted bids resulted in USDA forgiving the associated loans, the loans

⁴The County Executive Directors of Reno County, Kansas, and Kossuth County, Iowa, and the Chief Program Assistant of Deaf Smith County, Texas. We contacted these directors because their counties have historically high amounts of CCC loan activity. While not statistically representative of all ASCS county offices, these county offices used the same procedures for processing bids under the PIK commodity acquisition program used nationwide.

from the bid file had to be matched with the loan file eventually. USDA experienced matching problems with about 5-7 percent of the loans. While this portion of the bids would have required additional processing time, USDA could have acquired the needed commodities within the required time period using the bids without matching problems.

The Deputy Administrator and the Chief, Loan Branch, pointed out that if more time had been available, they would have performed further analysis that would have considered (1) the amount of accrued interest lost as a result of forgiving each loan and (2) the location of the loan commodities relative to USDA's PIK obligations. We agree that an analysis including these factors would have been desirable because considering the location of loan commodities could have allowed USDA to minimize the total cost of acquiring and positioning PIK commodities.

We acknowledge that USDA was under considerable time pressure and under the circumstances was faced with a difficult decision. Because of these factors and because the decision was made in the past, we do not wish to substitute our judgement for USDA's after the fact. However, because of the significant savings potential of using a unit cost approach, we wanted to demonstrate that the approach was feasible for the PIK purchase program, and could affect future USDA commodity purchase programs.

USDA has made large commodity purchases on occasions prior to the PIK program. USDA purchased large amounts of wheat, for example, following the Soviet grain embargo in 1980. USDA used a unit cost approach in that instance, accepting bids on a dollars-per-bushel basis. We believe that USDA should use a unit cost approach for future purchases of loan collateral because such an approach permits USDA to minimize government costs.

Recommendation to the Secretary of Agriculture

Because comparing bids on a unit cost basis will allow USDA to acquire commodities at lower cost, we recommend that the Secretary use the unit cost approach in future acquisitions of commodities held as loan collateral.

POSITIONING OF PIK COMMODITIES

Outdated inventory information and changing estimates of PIK obligations affected USDA's efforts to relocate CCC's available inventory to match PIK obligations on a county-by-county basis; however, the programwide impact of these factors does not appear to be too significant. Because of these factors, USDA did not

issue loading orders for commodities in some counties by the prescribed availability dates and exchanged commodities to make PIK wheat, corn, and grain sorghum available in counties where they were not needed.

County offices provided information on USDA's PIK obligations to the Kansas City office in May 1983. This information was updated several times between May and October 1983 to correct errors and to reflect harvest for PIK information. As a result, the estimated obligations fluctuated during the time the Kansas City office tried to meet those obligations. The following table shows the details of changes in USDA's estimated PIK needs.

Fluctuations in USDA's Estimated PIK Needs

	<u>Corn</u> (bushels)	<u>Grain</u> <u>Sorghum</u> (bushels)	<u>Wheat</u> (bushels)	<u>Rice</u> (pounds)	<u>Cotton</u> (pounds)
	- - - - - (thousands) - - - - -				
Estimated needs, 5/25/83	1,799,260	227,232	550,977	4,029,059	1,972,800
Changes in needs:					
5/25 to 7/13/83	+10,037	-26,906	+5,126	+66,381	-12,000
7/13 to 8/8/83	-55,658	-11,847	-20,708	-133,572	-12,960
8/8 to 8/29/83	-9,499	-11,067	+8,288	+38,511	-
8/29 to 9/9/83	+112,813	-418	+2,541	+110,530	-22,080
9/9 to 10/14/83	-92,850	+616	+46	+11,845	+35,374
10/14 to 1/4/84	<u>+24,555</u>	<u>-85</u>	<u>+101</u>	<u>-3,500</u>	<u>-26,643</u>
Estimated needs, 1/4/84	1,788,566 ^a	177,525	546,372 ^a	4,119,254	1,934,491

^aDoes not add due to rounding.

Information on the amount of CCC inventory available for PIK allocations and exchanges was updated weekly at the Kansas City office as new data became available to the county offices. The updates reflected inventory changes, including increases due to normal CCC loan forfeitures as well as forfeitures from the loan purchase program. The large volume of forfeitures for PIK delayed

recording of forfeiture data in the automated inventory system, which caused the weekly inventory updates to be understated.

In July 1983, USDA's OIG reviewed forfeiture documents unrecorded as of July 14 and found that these represented inventory of about 789 million bushels, an amount equal to the wheat, corn, and grain sorghum then reported as available for PIK. About 354 million bushels were unrecorded because of county offices' delays in transmitting loan forfeiture documents from the loan purchase program, and about 435 million bushels were unrecorded because the Kansas City office had not processed some 61,000 loan forfeiture documents received.

We noted that by September 30, 1983, the last date for which USDA kept such data, the number of unprocessed loan forfeiture documents had been reduced to about 3,675. We could not determine the exact number of bushels involved because, between September 30 and the time of our review in November, the documents had been processed and filed. However, using the same ratio of documents-to-bushels reported by OIG, we estimate that the unrecorded inventory as of September 30 was about 22 million bushels, or about 3 percent of CCC's estimated available inventory of wheat, corn, and grain sorghum.

USDA officials said that the fluctuating PIK obligation estimates and inventory processing delays had contributed to some counties not receiving all of their PIK commodities on the promised availability dates. However, a Kansas City office official responsible for managing PIK allocations to the counties estimated that, in spite of the problem, 99 percent of the counties nationwide received some portion, and between 50 and 60 percent of the counties received all, of their PIK commodities by the promised availability dates. Our review of the timing of PIK commodities in seven states showed that about 97 percent of the commodities for those states was made available by the prescribed availability dates.

Also, as a result of not having current data on inventory and PIK obligations at any one time, USDA contracted for some unnecessary commodity exchanges which in turn resulted in some unnecessary costs. For example, on the basis of reported need of 419,297 bushels of grain sorghum for Pawnee County, Oklahoma, USDA entered an exchange contract. In exchange for providing 419,177 bushels in the county, USDA gave the contractor about 425,047 bushels, which cost USDA about 5,870 bushels. Later information showed that the actual need in Pawnee County was 4,193 bushels. Although USDA subsequently modified the contract, as of January 30, 1984, there were about 86,556 unallocated and unneeded bushels.

USDA has not determined the exact unused portion of the commodities received in exchanges. However, about 3.5 million bushels (about 1 percent) of the commodities received in the exchange program were not allocated for PIK needs, either because inventory was available but not recorded into Kansas City's inventory system at the time of the exchange or because estimated needs decreased. Using the average cost of the net amount of commodities USDA gave up in the exchange program, we estimate this positioning cost CCC about \$1.7 million. In addition to the amounts not allocated for PIK, the Kansas City office official responsible for managing this aspect of the program estimated that a small amount--less than 5 percent--of the commodities allocated for PIK would probably not be used after final needs are determined.

USDA USUALLY MET ITS PIK OBLIGATIONS IN THE STATES WE REVIEWED

Our review of loading orders in the Kansas City office showed that USDA provided most PIK commodities on the promised date and of the grade specified for the PIK program. Also, as provided in PIK regulations, most of the wheat, corn, and grain sorghum was made available in the producers' own counties or in nearby counties. The producers and CEDs we contacted told us that they were generally satisfied with USDA's performance in meeting its PIK obligations.

Timeliness of PIK payments

The loading orders we reviewed showed that most PIK allocations were made available to counties by the promised availability dates, except for cotton. Because CCC's cotton purchases were not completed until September, USDA advanced the availability dates for cotton by 40 days. For the other PIK commodities, an average of 96 percent of PIK allocations were made available by the prescribed availability date in the states we reviewed. The following table shows the details on the timing of PIK payments.

Timing of PIK Payments

<u>State/commodity</u>	<u>Quantity in sample counties</u>	<u>Percent of PIK allocations made available</u>			
		<u>By availability date</u>	<u>Between 1 and 30 days</u>	<u>Between 31 and 60 days</u>	<u>More than 60 days past availability date</u>
Kansas/wheat	2,869,376 (bu)	43.9	56.0	-	-
Tennessee/wheat	981,232 (bu)	100	-	-	-
Illinois/corn	42,819,575 (bu)	99.1	0.8	0.1	-
Georgia/corn	2,180,594 (bu)	99.7	0.3	-	-
Texas/grain sorghum	4,789,329 (bu)	98.4	0.9	0.6	0.1
Louisiana/rice	152,440,510 (lb)	97.0	3.0	-	-
California/ cotton	95,212,134 (lb) ^a				
Weighted average		96.0			

^aAll allocations reviewed were made available between 29 and 38 days past the original availability date.

As the table indicates, between an estimated 97 to 100 percent of the commodities were made available by the prescribed availability dates in all the states except Kansas, where an estimated 44 percent was made available by the prescribed dates and 56 percent within 30 days thereafter.

The CEDs we contacted said that the portions of PIK commodities not made available by the prescribed dates did not present a problem to most of their counties' producers. One CED told us that not all producers wanted to redeem their PIK entitlement certificates on the first day of the availability period, and the county was able to accommodate those producers who did.

However, according to some CEDs, a few producers experienced problems because their PIK entitlements were not available to them on the date promised. For example, the CEDs in Merced and Kern counties in California told us on December 16, 1983, or 62 days past the original availability date of October 15, that some of their producers still did not have all their PIK cotton entitlements. (Some producers received adjustments to their original

entitlements due to differences in quality or class of cotton.) Both CEDs said that, as a result, producers may have had to pay more interest on loans they planned to pay off when they received their PIK cotton. The CED in Kern County said that producers in that county frequently had contracted to sell their PIK cotton on the promised availability date and incurred charges if unable to meet their contracts. In another case, the CED in East Carroll Parish, Louisiana, said that two producers in his parish who received their PIK rice after the promised availability date received a lower sales price than they would have received if the payment had been on time. However, the CED said that the producers in his parish were rarely affected by the timing of their PIK payments.

Grade of PIK commodities

The PIK program provided that commodities distributed for PIK would be of certain specified grades (or classes) such as Number 2 yellow corn. For grains and rice, grades are determined by such factors as color, moisture, foreign matter content, and the amount of broken or heat-damaged kernels. Rice is further classified by the length of the grain. Cotton classes are determined by color, bark and leaf content, and amount of preparation; cotton is also classified by length of the fibers. The PIK program specified certain nationwide standard grades for wheat, corn, and grain sorghum, while the standards for rice and cotton varied by growing area.

The program provided, however, that if CCC did not have enough commodities of specified grade or class, USDA would compensate by allocating an additional quantity of commodities below the specified grade or class, or a reduced quantity of commodities above the specified grade or class. The additions or reductions are known as quality adjustments.

While none of the states we reviewed were allocated all of their PIK commodities of specified grades or classes, an estimated 95 percent of the wheat, corn, and grain sorghum PIK allocations were of the specified grades. The following table shows the details on the grades of wheat, corn, and grain sorghum allocated for PIK in the states we reviewed.

Grade of PIK Commodities

<u>State/ commodity</u>	<u>Quantity in sample counties</u>	<u>Percent of PIK allocations of</u>				<u>Grade not shown</u>
		<u>Specified grade or better</u>	<u>1 grade below</u>	<u>2 grades below</u>	<u>3 or more grades below</u>	
Kansas/wheat	2,869,376 (bu)	62.0	31.0	6.5	0.5	-
Tennessee/wheat	981,232 (bu)	90.1	8.5	1.0	0.4	-
Illinois/corn	42,819,575 (bu)	97.4	1.9	0.3	0.1	0.2
Georgia/corn	2,180,594 (bu)	98.0	1.0	0.5	0.5	-
Texas/grain sorghum	4,789,329 (bu)	96.8	2.5	-	-	0.7
Weighted average		95.0				

As the table indicates, an estimated 90 percent or more of the three PIK commodities were of the specified grade in each state except Kansas, where an estimated 62 percent was of the specified grade and 31 percent was one grade below.

In California, individual allocations to cotton producers were made in a broad mix of different classes and fiber lengths. Similarly, Louisiana parishes were allocated rice of several different grades and grain lengths. Because of the large number of different classifications for these commodities--about 50 for cotton and over 100 for rice--and because the rice and cotton standards specified for PIK varied by growing area, we did not obtain specific data on each allocation.

According to the CEDs and producers we contacted, most producers who received commodities of below-specified grade were satisfied with the quality adjustments. However, the CEDs told us that a few producers had experienced problems with the grade of their PIK commodities. For example, some participating producers in East Carroll Parish, Louisiana, were originally issued PIK entitlements for rice stored in California. USDA later made locally stored rice available to the parish's producers. According to the CED, the locally stored rice generally sold for a higher price because it was of longer grain than the California rice. However, one producer had already sold his PIK rice in California for a lower price than he would have received in Louisiana. The CED of Victoria County, Texas, told us that some producers received lower prices for their grain sorghum PIK payments because the grain was below specified grade. Both of these

CEDs, however, told us that they had received very few complaints about the quality of PIK commodities.

While we did not review rice allocations in Texas, we noted that a group of participating Texas rice producers had filed suit in the United States District Court in Galveston, Texas. The producers grow No. 1 long grain rice. The suit alleges that (1) USDA did not honor the producers' enrollment contracts because it made payment in medium grain rice and (2) USDA could make long grain rice available instead of the medium grain rice. As of July 24, 1984, the suit was not settled.

Location of PIK commodities

Wheat, corn, and grain sorghum producers designated a preferred warehouse where they wanted to receive their PIK payments. The warehouse had to have a storage agreement with CCC. However, USDA provided that, if impossible to provide a producer's PIK commodity in the preferred warehouse, it would use a warehouse in an adjacent county or the nearest warehouse having a storage agreement with CCC that was between the producer's county and a terminal warehouse. Terminal warehouses are located adjacent to major transport facilities such as railroads, ports, and highways.

An estimated 76 percent⁵ of the total wheat, corn, and grain sorghum allocations in reviewed states were made available at warehouses in the producers' own counties; in the other 24 percent of the allocations, the distance between the warehouse and the producers' county averaged 62 miles. The following table shows more details on the location of PIK wheat, corn, and grain sorghum in reviewed states.

⁵This estimate excludes Tennessee and Georgia. Because the number of loading orders for the counties in these states was small, we could not make a meaningful estimate of the statewide percentage. The percentages shown for these states on the following table apply only to the sampled counties, not the entire state.

Location of PIK Commodities

<u>State/commodity</u>	<u>Quantity in sample counties</u>	<u>Percent of PIK allocation located</u>		<u>Distance between warehouse and producer counties (miles)</u>		
		<u>In producer's county</u>	<u>In another county</u>	<u>Average</u>	<u>Minimum</u>	<u>Maximum</u>
Kansas/wheat	2,869,376 (bu)	75	25	91	20	205
Tennessee/wheat	981,232 (bu)	40	60	55	20	230
Illinois/corn	42,819,575 (bu)	75	25	59	10	255
Georgia/corn	2,180,594 (bu)	20	80	68	15	155
Texas/grain sorghum	4,789,329 (bu)	82	18	70	20	365
Weighted average ^a		76	29	62	-	-

^aExcluding Tennessee and Georgia.

As the table indicates, an estimated 75-82 percent of the PIK commodities in the three major producing states--Kansas, Illinois, and Texas--were made available in the producers' counties. In our sample counties in Georgia, 20 percent of PIK corn was made available in the producers' counties, while about 80 percent was made available in other counties an average of 68 miles away. In our sample counties in Tennessee, 60 percent of PIK wheat was made available an average of 55 miles from the producers' counties. The Chief of ASCS Bulk Grain Branch explained that Tennessee and Georgia have fewer commercial commodity warehouses because these states are not major producers of wheat and corn, respectively. Consequently, USDA found it more difficult to locate warehouses in all PIK producers' counties.

The CEDs contacted said that most producers did not experience problems with the location of their PIK commodities; some producers, in fact, designated warehouses outside of their own counties. However, they said that a few producers had experienced problems when their PIK entitlements were made available outside their counties. A producer in Obion County, Tennessee (which received 100 percent of its PIK wheat from warehouses outside the county), told us that the warehouse paid him 4 cents a bushel less for his PIK wheat than he would have received in his home county. A rice producer in Pointe Coupee Parish, Louisiana, told us that he was not satisfied with the California rice and maintained that he would have received a better price if the rice had been made available in Louisiana.

As mentioned previously, some participating rice and cotton producers did not receive their PIK commodities locally but rather where the commodities were stored. According to the records we reviewed, Louisiana rice producers received their PIK payments either in Louisiana or California. California cotton producers received their PIK payments in California as well as nine other states.

AGENCY COMMENTS AND
OUR EVALUATION

In commenting on our draft report (see app. IV), USDA said that it considered but did not use the unit cost method to acquire loan commodities for the PIK program because it was more complex and time consuming.

As our draft report stated, officials of three counties with historically high rates of loan activity told us that their offices could have computed the unit cost of each bid. This computation, made at the time that producers submitted the bid using loan records readily available in the county office, would have been included with the data on each bid forwarded to the Kansas City office. We clarified our report to show that, because the officials said that this calculation would have required only a few minutes for each bid, the information could have been sent to Kansas City within the time period actually used. The Chief of the Kansas City office's Analysis and Procedures Division, responsible for managing the loan purchase program, agreed that if the county offices had computed each bid's unit cost, USDA could have selected bids on the unit cost basis. Our draft report also suggested that USDA's Kansas City office could have computed unit costs for each bid using its then-current automated loan file by matching loan numbers on the loan and bid files.

Subsequent to receiving USDA's comments, we met with USDA officials. ASCS' Deputy Administrator for Management explained that, in his opinion, county offices could not have accurately computed a unit cost for each bid in the available time; as support for this opinion, he noted that the bid information actually submitted by the county offices was not entirely accurate and timely. He also estimated that the errors arising from calculating a unit cost for each bid using the Kansas City office's automated files precluded this approach between the time that the offer to accept bids was announced (Mar. 29, 1983) and the date that the accepted bids were announced (Apr. 22, 1983).

Our objective in suggesting methods of calculating unit cost was to demonstrate that the approach was feasible as well as cost

saving. Our draft did not suggest that having county offices calculate a unit cost would result in more accurate bid information. We recognize that with any program of this size and complexity errors and delays may occur; however, the fact that the same persons and administrative channels would have been used suggests that the incidence of errors or untimeliness would not have changed significantly if the unit cost approach had been used rather than the bid percentage approach. Regarding our suggestion that the Kansas City office compute a unit cost for each bid, our draft did point out that USDA experienced problems in matching about 5-7 percent of the loans from the bid file to its automated loan file. We revised our final report to say that this portion of the bids may have required additional processing time but that USDA could have selected enough bids to acquire the needed commodities within the required time period. Because the process of resolving matching problems is the same, bids with matching problems should not have taken more time to process under the unit cost method than under USDA's bid percentage method. In either case, these bids would cause USDA some delay in acquiring the commodities represented by the problem bids.

USDA also commented that using a unit cost approach would make little difference in the cost of acquiring commodities and presented a figure of about \$28 million. However, USDA developed this figure by comparing two cost estimates: (1) the cost of commodities, valued at national average loan rates, acquired under the bid percentage method using the 20 percent maximum bid criterion and (2) the estimated cost of the commodities that would have been acquired, under the bid percentage method, using a 35 percent maximum bid criterion. Because both of these methods use the same (bid percentage) method of selecting bids and do not use a unit cost method, USDA's analysis is not a comparison of the estimated cost of commodities acquired under two different methods, and the \$28 million does not actually reflect savings using a unit cost method.

In our draft report, we estimated that using a unit cost approach to purchase loan commodities would save \$256 million. In commenting on the draft, USDA said that this figure was distorted because our estimated loan rates for warehouse-stored loan commodities were higher than the actual rates. (When producers obtain CCC loans for their crops, the crops may be stored either in CCC-approved warehouses or in storage facilities on the producer's farm. If the crop is warehouse stored, the loan rate is higher to reflect transportation costs from the farm to the warehouse.)

As stated in our detailed methodology in appendix II, the actual loan rates for each of the 286,000 bids USDA received were

not available at the time of our review. In developing our initial estimate, we used the mean averages of USDA's minimum and maximum loan rates for warehouse-stored commodities for each state, commodity, and crop year as an estimate of actual rates. We used these averages because, after conferring with USDA officials at the Kansas City office, we identified them as the best available estimate and stated that we did not statistically verify how close our estimated rates were to actual rates.

However, in commenting on this report, USDA suggested that a more accurate estimated loan rate for warehouse-stored loan commodities would be either the national average loan rate or the average book value of loans for each commodity and crop year. The average book value for a given crop year is derived by dividing the total dollar amount of outstanding loans for the crop year by the total number of units (bushels or pounds) represented by outstanding loans. Assuming, for example, \$1 million in outstanding loans for 1981 crop-year wheat, comprised of outstanding loans representing 250,000 bushels, the average book value of 1981 crop-year wheat loans is \$4.00 per bushel (\$1 million divided by 250,000). In a subsequent discussion, the Director of the Kansas City office said that the book value rates would be a somewhat more accurate estimate of both farm-stored and warehouse-stored loan rates.

Because our finding demonstrates that using a unit cost approach allows lower acquisition costs, and not the specific amount of savings that would have resulted had the PIK program used this approach, we also used USDA's suggested book value loan rate to determine unit costs for loan commodities. Using this rate, the unit cost approach would have saved about \$58 million. Accordingly, our report was revised to include this estimate.

USDA commented that it did not have access to our computer program and therefore could not determine how using different rates would affect the estimated savings. USDA requested, and we provided, detailed results of our analysis. USDA did not ask for access to our computer program at any time during our review.

USDA stated that if the unit cost method had been used, commodities would have been acquired in fewer locations, and thus any cost savings would be offset by additional costs to position the inventory. In a subsequent discussion, the Assistant Deputy Administrator for Commodity Operations explained that using a unit cost approach would result in USDA forgiving fewer loans to acquire the same amount of commodities and thus there would be fewer locations. However, he said that USDA could not quantify the amount of additional positioning costs. We noted that our unit cost method does result in forgiving fewer loans; however, neither we nor USDA can determine the amount of possible additional costs to position commodities.

METHODOLOGY USED FOR EVALUATINGTHE LOAN PURCHASE PROGRAM

We base our estimate of the cost savings resulting from using a unit cost bid acceptance criterion on a comparison of the total cost of the commodities actually purchased, valued by unit cost, with the cost of the commodities that would have been selected had the bids been evaluated on the basis of the lowest unit cost. Using USDA's automated file of the approximately 286,000 bids received under the loan purchase program, we computed unit costs (cost per bushel for wheat and corn, or cost per hundred pounds of grain sorghum) for each bid received.

The bids were producers' offers to sell to USDA commodities used as collateral for obtaining CCC loans. Because USDA periodically updates its loan file to reflect recent activity such as payments and forfeitures, we could not, at the time of our review in January 1984, use the loan file to calculate unit costs associated with the 286,000 bids USDA had received. Therefore, we estimated the loans' unit costs using two sets of loan rates to approximate actual loan rates. Using one set of rates resulted in estimated savings of \$256 million, while the second set of rates, suggested by USDA in its comments on our draft report, resulted in estimated savings of \$58 million.

In developing our initial \$256 million estimate, we first identified from the bid file the bidder's state, the commodity and related crop year, the loan number, the quantity under loan, and whether the offered loan collateral was stored in a CCC-approved warehouse or on the producer's farm. (When producers obtain CCC loans for their crops, the crops may be stored either in CCC-approved warehouses or in storage facilities on the producer's farm. For warehouse-stored crops, higher loan rates reflect the cost of transporting the crop from the farm to the warehouse.) For farm-stored collateral, we multiplied the national average loan rate for farm-stored commodities by the amount of commodity under loan to estimate the loan's total dollar value. For warehouse-stored loans, we multiplied the arithmetic mean of the state minimum and maximum loan rates for warehouse-stored loan commodities by the amount of commodity under loan to estimate the total dollar value of the loan. We used these rates because, after conferring with officials at the Kansas City office, we identified them as the best available estimates.

Our second step divided each loan bid's outstanding principal, obtained in step one, by the amount of commodity that CCC would have acquired under the bid. This gave us the loan's unit cost. For example, assume a producer with 50,000 farm-stored bushels of 1981 crop-year wheat under loan submitted a bid of 10 percent. Using CCC's average book value for farm-stored 1981

wheat of \$3.46 a bushel, we determined the total value of the loan to be \$173,000 (\$3.46 x 50,000 bushels). With a bid of 10 percent, CCC would acquire 45,000 bushels. Thus, the unit cost would be \$3.84 (\$173,000 divided by 45,000 bushels).

After calculating a unit cost for each loan bid, we selected the number of bids, beginning with those of lowest unit cost for each commodity, necessary to acquire the same amount of commodities CCC actually acquired through the loan purchase program and used for PIK. Then we added the total loan values of the selected bids to arrive at a total "acquisition" cost for each commodity. Next, we added the total loan value of the bids USDA actually accepted to arrive at CCC's total cost for each commodity. The results are shown in the following table:

Comparison of Acquisition Costs
Using Different Bid Selection Criteria

<u>Commodity</u>	<u>Quantity acquired</u> (millions)	<u>Cost of commodities</u>		<u>Difference</u>
		<u>Using USDA's bid ratio selection criterion</u>	<u>Using GAO's unit cost selection criterion</u>	
Wheat (bu)	188.2	\$ 883,873,310	\$ 822,426,394	\$ 61,446,916
Corn (bu)	760.0	2,602,434,424	2,417,334,294	185,100,130
Grain sorghum (bu)	111.1	<u>325,657,182</u>	<u>315,712,225</u>	<u>9,994,957</u>
Total		<u>\$3,811,964,916</u>	<u>\$3,555,472,913</u>	<u>\$256,492,003</u>

In commenting on our draft report (see app. IV), USDA stated that the \$256 million estimate was distorted because our approximated loan rates for warehouse-stored commodities were higher than the actual rates. USDA suggested that a more accurate estimated loan rate for warehouse-stored loan commodities would be the average "book value" of loans for each commodity and crop year. The average book value for a given crop year is derived by dividing the total dollar amount of outstanding loans for the crop year by the total number of units (bushels or pounds) represented by outstanding loans. For example, if there is \$1 million in outstanding loans for 1981-crop wheat, comprised of outstanding loans representing 250,000 bushels, then the average book value of 1981 crop-year wheat loans is \$4.00 per bushel (\$1 million divided by 250,000). In a subsequent discussion, the Director of the Kansas

City office said that the book value would also be a somewhat more accurate estimate of farm-stored loan rates.

Because our finding is that using a unit cost approach allows lower acquisition costs, not the specific amount of savings that would result from a unit cost approach had it been used in the PIK program, we used USDA's suggested book value loan rate to determine unit costs for loan commodities. Then, using the same methodology outlined above, we estimated the savings at \$58 million. The results are shown in the following table.

Comparison of Commodity Acquisition Costs

<u>Commodity</u>	<u>Quantity</u> (millions)	<u>Cost of Commodities</u>				<u>Difference in total cost</u>
		<u>Using USDA's bid ratio selection criterion</u>		<u>Using GAO's unit cost selection criterion</u>		
		<u>Total</u> (million)	<u>Avg. unit cost</u>	<u>Total</u> (million)	<u>Avg. unit cost</u>	
Wheat (bu)	188.2	\$ 847	\$4.50	\$ 823	\$4.37	\$24
Corn (bu)	760.0	2,397	3.15	2,374	3.12	23
Grain sorghum (bu)	111.1	<u>344</u>	3.10	<u>333</u>	3.00	<u>11</u>
		<u>\$3,588</u>		<u>\$3,530</u>		<u>\$58</u>

METHODOLOGY FOR EVALUATING
DISTRIBUTION OF PIK COMMODITIES

To evaluate the effectiveness of USDA's distribution of PIK commodities, we reviewed PIK allocations for seven sample states, focusing on one PIK commodity per state. The commodities and states we reviewed were: wheat in Kansas and Tennessee, corn in Illinois and Georgia, grain sorghum in Texas, rice in Louisiana, and cotton in California. We selected Texas, Louisiana, and Illinois because they had the largest PIK requirements from CCC inventory for grain sorghum, rice, and corn, respectively. To obtain broad geographic coverage, we did not wish to select the same state for more than one commodity. California had the second largest CCC inventory requirement for cotton, after Texas. Kansas had the third largest CCC inventory requirements for wheat, after California and Texas. Consequently, we selected Kansas and California. On the basis of our judgment, we selected Tennessee and Georgia (1) to broaden our geographic coverage, (2) to include states with CCC inventory needs relatively smaller than the other selected states for comparison with the other states, and (3) to include two states each for wheat and corn because these commodities make up the greatest volume of PIK payments nationwide. The seven states selected for each commodity make up about 10 percent of the wheat, 18 percent of the corn, and 25 percent of the grain sorghum, cotton, and rice provided from CCC inventory nationwide for PIK. The ASCS Deputy Administrator for Commodity Operations said that, because the PIK payment process was the same in all states, the states we chose are as representative as any group selected on the basis of judgement.

We selected all 11 California counties having PIK requirements from CCC inventory. In the remaining six states, we randomly selected counties to permit statistical generalization of the results to the entire state. Information about our sample states is shown in the following table.

Information on Sample States

<u>Commodity</u>	<u>State</u>	<u>No. of counties with PIK requirements from CCC inventory</u>	<u>No. of sample counties</u>
Wheat	Kansas	105	30
	Tennessee	81	25
Corn	Illinois	102	30
	Georgia	144	30
Grain sorghum	Texas	218	40
Cotton	California	11	11
Rice	Louisiana	33	20

For each county, we reviewed the loading orders¹ issued by the Kansas City commodity office to meet USDA's PIK obligations to the county's producers. In reviewing the loading orders for each commodity, we determined the quantity of PIK commodities USDA had provided as of the county's promised availability date and the timing of subsequent PIK allocations. In addition, for wheat, corn, and grain sorghum, we identified the grades of the commodities and whether the commodities were made available in warehouses within the producer's county. For commodities located in a warehouse outside the producer's county, we estimated the straight-line distance, using a map with a scale of miles, from the warehouse's locality to the midpoint of the producer's county. We did not obtain similar information for rice and cotton because (1) there are a large number of different varieties, classes, and grading factors for these commodities and (2) much of the cotton and rice was not made available locally to producers. For rice and cotton, we noted the date of the allocation and whether or not the commodity was made available in the producer's state or another state.

We aggregated the data for each loading order allocation into a file for each selected state. Where applicable, for each state sample, we sorted and analyzed the total PIK quantity by distance from producer county to warehouse locality, timeliness, and grade. Next, we used the results of the analysis of our sample counties to estimate the total PIK quantity by distance, timeliness, and

¹For wheat, corn, and grain sorghum we did not review certain loading orders issued from warehouses in adjacent states to meet the requirements in our selected states. However, there were few loading orders of this type. We reviewed all allocations for rice and cotton.

grade for each respective state. We calculated the standard error of these estimates at the 95 percent level of confidence. For example, we estimate that between 65.8 and 84.2 percent (75 percent plus or minus 9.2 percent) of all PIK corn in Illinois was made available in the producer's own county. The following tables show, for each state, the results of our analysis.

Kansas - Wheat

	<u>Number of bushels in sample of counties</u>	<u>Actual percent in sample counties and estimated percent in state</u>	<u>Standard error of the estimate at 95 percent confidence level</u> (percent)
Location where PIK commodities were provided:			
Producer county	2,155,626	75.1	12.2
Another county ^a	713,750	24.9	12.2
Loading orders issued:			
By availability date	1,259,674	43.9	15.6
Within 1 to 30 days later	1,609,702	56.1	15.6
Grade of commodities to be provided to producers:			
Standard grade or better	1,777,924	62.0	9.3
1 grade below standard	889,369	31.0	9.5
2 grades below standard	187,202	6.5	2.7
3 or more grades below standard	14,881	0.5	0.4

^aAverage distance from the producer county to another county was 91 miles with a standard error of 7 miles.

Tennessee - Wheat

	<u>Number of bushels in sample of counties</u>	<u>Actual percent in sample counties and estimated percent in state</u>	<u>Standard error of the estimate at 95 percent confidence level</u> (percent)
Location where PIK commodities were provided:			
Producer county	396,512	40.4	(b)
Another county ^a	584,720	59.6	(b)
Loading orders issued:			
By availability date	981,232	100.0	-
Grade of commodities to be provided to producers:			
Standard grade or better	884,151	90.1	14.9
1 grade below standard	83,762	8.5	12.8
2 grades below standard	10,233	1.0	1.6
3 or more grades below standard	3,086	0.3	0.5

^aAverage distance from the producer county to another county was 54 miles with a standard error of 4 miles.

^bBecause the number of loading orders was small, the standard error of the estimate was too large to permit a meaningful estimate of the statewide percentage. Consequently, the indicated percentage represents only the actual percent for the sample counties.

Illinois - Corn

	<u>Number of bushels in sample of counties</u>	<u>Actual percent in sample counties and estimated percent in state</u>	<u>Standard error of the estimate at 95 percent confidence level</u> (percent)
Location where PIK commodities were provided:			
Producer county	31,803,247	75.0	9.2
Another county ^a	11,016,328	25.0	9.2
Loading orders issued:			
By availability date	42,423,289	99.1	0.5
Within 1 to 30 days later	366,729	0.8	0.5
Within 31 to 60 days later	29,557	0.1	0.1
Grade of commodities to be provided to producers:			
Standard grade or better	41,723,790	97.4	1.2
1 grade below standard	821,921	1.9	1.1
2 grades below standard	139,900	0.3	0.2
3 or more grades below standard	41,794	0.1	0.1
Not shown	92,170	0.2	0.4

^aAverage distance from the producer county to another county was 59 miles with a standard error of 15 miles.

Georgia - Corn

	<u>Number of bushels in sample of counties</u>	<u>Actual percent in sample counties and estimated percent in state</u>	<u>Standard error of the estimate at 95 percent confidence level</u> (percent)
Location where PIK commodities were provided:			
Producer county	433,917	19.9	(b)
Another county ^a	1,746,677	80.1	(b)
Loading orders issued:			
By availability date	2,173,894	99.7	0.5
Within 1 to 30 days later	6,287	0.3	0.5
Grade of commodities to be provided to producers:			
Standard grade or better	2,137,372	98.0	2.2
1 grade below standard	22,270	1.0	1.0
2 grades below standard	12,330	0.6	0.9
3 or more grades below standard	8,622	0.4	0.4

^aAverage distance from the producer county to another county was 68 miles with a standard error of 10 miles.

^bBecause the number of loading orders was small, the standard error of the estimate was too large to permit a meaningful estimate of the statewide percentage. Consequently, the indicated percentage represents only the actual percent for the sample counties.

Texas - Grain Sorghum

	<u>Number of bushels in sample of counties</u>	<u>Actual percent in sample counties and estimated percent in state</u>	<u>Standard error of the estimate at 95 percent confidence level</u> (percent)
Location where PIK commodities were provided:			
Producer county	3,935,245	82.2	13.0
Another county ^a	854,084	17.8	13.0
Loading orders issued:			
By availability date	4,714,316	98.4	1.7
Within 1 to 30 days			
later	41,687	0.9	1.3
Within 31 to 60 days			
later	30,503	0.6	1.0
Over 60 days later	2,823	0.1	0.1
Grade of commodities to be provided to producers:			
Standard grade or better	4,633,834	96.8	3.3
1 grade below standard	119,781	2.5	3.0
Not shown	35,714	0.7	1.3

^aAverage distance from the producer county to another county was 69 miles with a standard error of 5 miles.

Louisiana - Rice

	<u>Number of bushels in sample of counties</u>	<u>Actual percent in sample counties and estimated percent in state</u>	<u>Standard error of the estimate at 95 percent confidence level</u> (percent)
Location where PIK commodities were provided:			
Producer county	98,521,665	41.4	8.0
Another Louisiana county ^a	53,918,845	23.2	7.4
California	83,558,732	35.4	7.0
Loading orders issued:			
By availability date	228,789,653	96.9	2.6
Within 1 to 30 days later	7,209,589	3.1	2.6

^aAverage distance from the producer county to another Louisiana county was 68 miles with a standard error of 4 miles.

California - Cotton

	Number of pounds in universe ^a	<u>Percent</u>
State where PIK commodities were provided:		
California	275,267	0.3
Alabama	21,199,774	22.3
Louisiana	1,493,595	1.6
Mississippi	3,560,054	3.7
North Carolina	3,778,273	4.0
Arkansas	25,858,021	27.2
South Carolina	377,591	0.4
Tennessee	15,980,010	16.8
Missouri	11,065,776	11.6
Texas	<u>11,623,782</u>	<u>12.2</u>
Total	<u>95,212,143</u>	<u>100.0^b</u>

^aWe reviewed all eleven California counties having PIK requirements from CCC inventory.

^bDoes not add due to rounding.

Loading orders issued

All allocations reviewed were made available between 29 and 38 days after the original availability date.

To cross-check our review of PIK loading orders, we telephoned USDA's ASCS county representatives, CEDs, and producers. Our objective was to obtain the CEDs' and producers' opinions on USDA's effectiveness in meeting PIK obligations. Time did not permit us to contact the CED in each sample county. Instead, we used our judgement to select for each state a mix of counties in which, based on our analyses of loading order information, USDA had generally met its PIK obligations with commodities that were favorable to the producers with respect to timeliness, grade, and location; as well as counties in which, based on our analyses, USDA's performance was somewhat less favorable. We contacted a total of 22 CEDs.

We contacted the CEDs from December 8 through 16, 1983, and asked a series of questions regarding the PIK commodities provided. Because we used our judgment to select the CEDs, the results are not necessarily representative of all counties in the sample.

Each CED we contacted provided us with the names of several producers in the county who participated in the PIK program. We contacted a total of 10 of these producers to determine their level of satisfaction with their PIK payments. Because of the limited number of contacts and the method of their selection, the producers' comments are not necessarily indicative of all producers in the county.



MAY 17 1984

DEPARTMENT OF AGRICULTURE
OFFICE OF THE SECRETARY
WASHINGTON, D. C. 20250

Mr. J. Dexter Peach
Director
Resources, Community, and Economic Development Division
United States General Accounting Office
Washington, D.C. 20548

Dear Mr. Peach:

Thank you for the opportunity to review and comment on your proposed report entitled "The Department of Agriculture's Acquisition and Distribution of Commodities for its 1983 Payment-In-Kind Program."

We evaluated acquisition bids on a straight "percentage" basis because it was the most expedient method. We considered the more complex and time-consuming "unit cost" method but determined that this alternative would make little difference.

For farm stored loans, the General Accounting Office (GAO) used the national average loan rate as a "unit" rate. For warehouse stored loans, the loan computer system in the Agricultural Stabilization and Conservation Service (ASCS) contains a validation table with the highest and lowest loan rates permitted to be recorded. ASCS set the upper end of the range high so that loan grain which had been transported long distances, e.g., Nebraska loan grain stored at the Gulf, could pass the validity check. GAO used the median of the range as a "unit" rate for warehouse stored loans. Because this unit rate is too high, GAO's computed savings are distorted. The enclosed Exhibit I compares the unit rates used by GAO, the national average loan rates, and the Commodity Credit Corporation (CCC) book value for farm stored and warehouse stored grain for each crop year.

Because we do not have access to GAO's computer program, we cannot determine how the use of different rates would change GAO's results. We did manually compare the "percentage" and "unit cost" methods using two premises--that national average loan rates could be used as unit rates, and that bids permitting producers to retain up to 35 percent of their loans would have been accepted for the earlier (lower unit rate) crop years. Exhibit II indicates the "unit cost" method would have cost a total of about \$28 million less. Our comparison, however, could not compare acquisition locations. We believe that acquisitions would have been in fewer locations under the "unit cost" method. Additional repositioning, at an undetermined additional cost, would have been necessary.

Sincerely,


DANIEL G. AMSTUTZ

Under Secretary for International
Affairs and Commodity Programs

Enclosures

Unit Costs

EXHIBIT I

			Used by GAO	National Loan Regular	Average Rate Reserve	OCC Book Value
Corn	1977	WS	€ 1.50	€ 2.00	€ 2.00	€ 2.03
	1978	FS	2.00	2.00	2.00	1.97
	1978	WS	2.00	2.00	2.00	1.99
	1979	FS	2.00	2.10	2.10	2.06
	1979	WS	3.18	2.10	2.10	2.10
	1980	FS	2.25	2.25	2.40	2.34
	1980	WS	3.45	2.25	2.40	2.38
	1981	FS	2.40	2.40	2.55	2.46
	1981	WS	3.55	2.40	2.55	2.56
	1982	FS	2.55	2.55	2.90	2.78
	1982	WS	3.58	2.55	2.90	2.93
Wheat	1976	FS	1.50	2.25	2.25	2.21
	1976	WS		2.25	2.25	2.33
	1977	FS	2.25	2.25	2.25	2.24
	1977	WS	2.42	2.25	2.25	2.36
	1978	FS	2.35	2.35	2.35	2.31
	1978	WS	2.92	2.35	2.35	2.30
	1979	FS	2.35	2.50	2.50	2.45
	1979	WS	3.91	2.50	2.50	2.57
	1980	FS	2.75	3.00	3.30	3.04
	1980	WS	4.33	3.00	3.30	3.10
	1981	FS	3.20	3.20	3.50	3.48
	1981	WS	4.23	3.20	3.50	3.63
	1982	FS	3.55	3.55	4.00	3.82
	1982	WS	4.66	3.55	4.00	4.19
Grain Sorghum	1980	FS	3.82	3.82	4.07	3.99
	1980	WS	4.71	3.82	4.07	4.12
	1981	FS	4.07	4.07	4.32	4.07
	1981	WS	4.66	4.07	4.32	4.41
	1982	FS	4.32	4.32	4.91	4.51
	1982	WS	4.46	4.32	4.91	5.18

Corn Using "Per Centage" Basis

EXHIBIT II
Page 1

Crop Year	Quantity CCC Acquired	Quantity Total Loans Redeemed	National Average Rate	Total Loan Value
1976	7,632	8,979	2.00	17,958
1977	1,681,985	1,978,806	2.00	3,957,612
1978	1,455,550	1,712,412	2.00	3,424,824
1979	1,359,686	1,599,631	2.10	3,359,225
1980	9,380,185	11,035,513	2.40	26,485,231
1981	403,739,636	474,987,807	2.55	1,211,218,908
1982	342,407,433	402,832,274	2.90	1,168,213,595
	<u>760,032,108</u>	<u>894,155,422</u>		<u>2,416,677,353</u>

Corn Using "Unit Cost" Basis

1976	46,190	61,439	2.00	122,678
1977	2,381,384	2,930,369	2.00	5,860,738
1978	1,852,832	2,252,932	2.00	4,505,864
1979	1,960,033	2,416,430	2.10	5,074,503
1980	15,065,695	18,770,899	2.40	45,050,158
1981	555,002,252	680,787,285	2.55	1,736,007,577
1982	183,723,722	209,313,554	2.90	607,015,106
	<u>760,032,108</u>	<u>916,534,908</u>		<u>2,403,636,824</u>

Wheat Using "Per Centage" Basis

EXHIBIT II
Page 2

Crop Year	Quantity CCC Acquired	Quantity Total Loans Redeemed	National Average Rate	Total Loan Value
1976	12,241	14,401	2.25	32,423
1977	166,160	195,482	2.25	439,835
1978	100,098	117,762	2.35	276,741
1979	473,862	557,485	2.50	1,393,713
1980	29,513,576	34,721,854	3.30	114,582,116
1981	55,627,182	65,443,744	2.29	229,053,104
1982	137,054,400	161,240,471	4.00	644,961,884
	<u>222,947,519</u>	<u>262,291,199</u>		<u>990,739,818</u>

Wheat Using "Unit Cost" Basis

1976	481,520	684,799	2.25	1,540,797
1977	2,059,418	2,900,136	2.25	6,525,306
1978	1,271,395	1,791,043	2.35	4,208,951
1979	3,403,921	4,743,283	2.50	11,858,207
1980	61,754,670	80,780,559	3.30	266,575,844
1981	55,627,182	65,443,744	3.50	229,053,104
1982	98,349,413	114,039,268	4.00	456,157,072
	<u>222,947,519</u>	<u>270,382,832</u>		<u>975,919,281</u>

Grain Sorghum Using "Per Centage" Basis

EXHIBIT II
Page 3

Crop Year	Quantity CCC Acquired	Quantity Total Loans Acquired	National Average Rate (CWT)	Total Loan Value
1980	176,385	1,367,890	4.07	5,567,312
1981	40,744,230	47,377,012	4.32	204,668,692
1982	40,552,944	47,154,586	4.91	231,529,017
	<u>82,473,559</u>	<u>95,899,488</u>		<u>441,765,021</u>

Grain Sorghum Using "Unit Rate" Basis

1980	2,388,340	3,016,808	4.07	12,278,409
1981	59,051,523	72,284,894	4.32	312,270,742
1982	21,033,686	23,803,950	4.91	116,877,443
	<u>82,473,559</u>	<u>99,105,652</u>		<u>441,426,594</u>

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